

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for purifying 1,1-difluoroethane, comprising bringing crude 1,1-difluoroethane containing at least one compound selected from the group consisting of unsaturated compounds each having two carbon atoms within the molecule and saturated chlorine-containing compounds each having two carbon atoms within the molecule, into contact with an adsorbent comprising a zeolite having an average pore size of 3 to 6 Å and a silica/aluminum ratio of 2.0 or less and/or a carbonaceous adsorbent having an average pore size of 3.5 to 6 Å ~~to reduce the content of said compound contained as an impurity in the crude 1,1-difluoroethane.~~

2. (original): The method for purifying 1,1-difluoroethane as claimed in claim 1, wherein the unsaturated compound having two carbon atoms within the molecule is at least one compound selected from the group consisting of ethylene, fluoroethylene, vinyl chloride and vinylidene chloride.

3. (original): The method for purifying 1,1-difluoroethane as claimed in claim 1, wherein the saturated chlorine-containing compound having two carbon atoms within the molecule is at least one compound selected from the group consisting of dichloroethane, 1-chloro-1-fluoroethane and 2-chloro-1,1,1,2-tetrafluoroethane.

4. (previously presented): The method for purifying 1,1-difluoroethane as claimed in claim 1, wherein the total content of said compounds contained as impurities in the crude 1,1-difluoroethane is 0.1 vol% or less.

5. (previously presented): The method for purifying 1,1-difluoroethane as claimed in claim 1, wherein the pressure for bringing the crude 1,1-difluoroethane into contact with said adsorbent is 1 MPa or less.

6. (previously presented): The method for purifying 1,1-difluoroethane as claimed in claim 1, wherein the total content of said compounds contained as impurities in the purified 1,1-difluoroethane is 100 vol ppm or less.

7. (previously presented): The method for purifying 1,1-difluoroethane as claimed in claim 1, wherein the total content of unsaturated compounds each having two carbon atoms within the molecule, contained as impurities in the purified 1,1-difluoroethane is 50 vol ppm or less.

8. (previously presented): The method for purifying 1,1-difluoroethane as claimed in claim 1, wherein the total content of saturated chlorine-containing compounds each having two carbon atoms within the molecule, contained as impurities in the purified 1,1-difluoroethane is 50 vol ppm or less.

9. (currently amended): The method for purifying 1,1-difluoroethane as claimed in claim 1, wherein the crude 1,1-difluoroethane is obtained by a method comprising the following steps (1) to (3):

- (1) a step of reacting 1,1-dichloroethane with hydrogen fluoride in the presence of a fluorination catalyst to obtain mainly a product containing 1,1-difluoroethane,
- (2) a step of separating hydrogen fluoride, 1,1-dichloroethane and 1-chloro-1-fluoroethane from the product containing 1,1-difluoroethane obtained in the step (1) and circulating the separated compounds to a reaction step, and
- (3) a step of separating, by distillation, hydrogen chloride and 1,1-difluoroethane from the product containing 1,1-difluoroethane obtained in the step (1).

10-19. (canceled).